

IN THE UNITED STATES DISTRICT COURT
FOR THE WESTERN DISTRICT OF TENNESSEE
WESTERN DIVISION

JON HALL,)
Petitioner,)
vs.) No. 1:05-CV-1199-JDB-EGB
RICKY BELL, Warden, Riverbend)
Maximum Security Institution,)
Respondent.)

DECLARATION OF RUBEN C. GUR, Ph.D.

Declarant, Ruben C. Gur, states:

1. I am presently a professor at the University of Pennsylvania Medical School and the Director of Neuropsychology of the Department of Psychiatry, all of which is shown more specifically in my curriculum vitae, attached as Exhibit A.

2. I make this affidavit based on personal knowledge, except where indicated otherwise. When I express an opinion, I do so based on my specialized knowledge, skill, experience, training and education, as reflected in Exhibit A. My opinions and conclusions are based on sufficient facts or data of the kind customarily relied upon by those with my training and expertise applying reliable principles and methods to the information and data available to me at the time the report was prepared.

3. Attached as Exhibit B to this declaration is a true and exact copy of my February 27, 2008 quantitative analysis of the testing of Mr. Jon Hall at the request of Messrs Bottei and Passino. The report sets forth my opinions and conclusions, which I state to a reasonable degree of psychological and medical certainty.

Further declarant saith not.

I declare under penalty of perjury that the foregoing is true and correct. Executed
on this 9 day of August, 2009.



Ruben C. Gur

CERTIFICATE OF SERVICE

A copy of this declaration will be served on counsel for respondent electronically
by the CM/ECF system.

/s/ Michael J. Passino

UNIVERSITY OF PENNSYLVANIA - SCHOOL OF MEDICINE
Curriculum Vitae

Date: June 2009

Ruben C. Gur, Ph.D.

HOME ADDRESS: 815 Saint George's Rd.
Philadelphia, PA 19119
Voice/Fax (215) 247-2716

OFFICE ADDRESS: Brain Behavior Laboratory
Department of Psychiatry
10 Gates Building
University of Pennsylvania
Philadelphia, PA 19104-4283
gur@upenn.edu
Tel: (215) 615-3604
Fax: (215) 662-7903

EDUCATION: 1967-70 B.A. Hebrew University of Jerusalem
1970-71 M.A. Michigan State University
1971-73 Ph.D. Michigan State University
1973-74 Postdoctoral Fellowship, Stanford University

POSTGRADUATE TRAINING AND FELLOWSHIP APPOINTMENTS:

Doctorate: 1971 NIMH
Summer Traineeship, Psychiatric Clinic
Oakland County Juvenile Court
Pontiac, Michigan

1971-72 Psychology Internship, Psychiatric Clinic
State Prison of Southern Michigan
Jackson, Michigan

1972-73 Psychology Internship, Counseling Center
Michigan State University
East Lansing, Michigan

Postdoctorate: 1973-74 Research Associate, Department of Psychology
Stanford University, Stanford, California

1974-76 Postdoctorate supervised clinical experience
Department of Psychiatry
University of Pennsylvania

MILITARY SERVICE: 1965-67 Israeli Defense Forces

FACULTY APPOINTMENTS:

1974-81 Assistant Professor
Department of Psychology
University of Pennsylvania School of Medicine
Philadelphia, PA

1981-84 Research Associate Professor of Psychology
in Neurology and Psychiatry
University of Pennsylvania School of Medicine
Philadelphia, PA

1984-88 Associate Professor of Psychology in
Psychiatry and Neurology
University of Pennsylvania School of Medicine
Philadelphia, PA

1988-Present Professor of Psychology in Psychiatry,
Neurology and Radiology
University of Pennsylvania School of Medicine
Philadelphia, PA

HOSPITAL AND ADMINISTRATIVE APPOINTMENTS:

1974-81 Supervisor, Clinical Training Program
Department of Psychology
University of Pennsylvania School of Medicine
Philadelphia, PA

1982-84 Director of Neuropsychology
Department of Neurology
The Graduate Hospital
Philadelphia, PA

1984-Present Director of Neuropsychology and the
Brain Behavior Laboratory,
Department of Psychiatry
Hospital of the University of Pennsylvania
Philadelphia, PA

2005-Present Director of the Center for Neuroimaging in Psychiatry
Department of Psychiatry
Hospital of the University of Pennsylvania
Philadelphia, PA

2005-Present Staff Psychologist
Philadelphia Veterans Administration Hospital

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Philadelphia, PA

BOARD SPECIALTY CERTIFICATION:

Diplomate in Clinical Neuropsychology
American Board of Professional Psychology

LICENSURE:

Licensed Psychologist, Commonwealth of Pennsylvania

AWARDS, HONORS AND MEMBERSHIP IN HONORARY SOCIETIES:

Erickson Award for Scientific Excellence for Writing in Hypnosis

NARSAD Distinguished Investigator Award

Member, Sigma Xi

Elected to Fellow status, National Academy of Neuropsychologists, 1986

Elected to Fellow status, American Psychological Association, Divisions 6 & 30, 1987

Recipient of 1990 Stephen V. Logan Award, National Alliance for the
Mentally Ill (NAMI)

Elected to Fellow status, The American Psychological Society, 1992

MEMBERSHIP IN PROFESSIONAL AND SCIENTIFIC SOCIETIES:

American Psychological Association, FELLOW

American Psychological Society, FELLOW

American College of Neuropsychopharmacology

The John Morgan Society

American Association for the Advancement of Science

International Neuropsychological Society

National Academy of Neuropsychologists

The New York Academy of Science

International Society for Neuroimaging in Psychiatry

EDITORIAL/ADVISORY POSITIONS:

Member, NIH Study Section on Clinical Neuroscience and Biological Psychopathology (1993-
1996)

Editorial Board: Archives of Clinical Neuropsychology (1985-1997), Journal of Mental Imagery
(1984-present), Brain and Cognition (1989-present), Brain and Language (1990-present),
Brain Imaging and Behavior (1994-present; founding member), Social Neuroscience
(founding member). Consultant to Panel on Neurological Aspects of Behavior: Development
of a National Research Strategy for NIH (1979) Schizophrenia Research (2004-present)

Advisory Board: The Greenwall Initiative on Imaging and Treating the Human Brain: Ethical and
Social Implications. The Center for Bioethics, University of Pennsylvania; Institute for
Strategic Threat Analysis and Response (ISTAR), University of Pennsylvania, (2002-)

The Conte Center on the Neurobiology of Suicide, Columbia University (J Mann, MD, PI),
Boston Center for Intervention Development and Applied Research (CIDAR is a NIMH-
sponsored program project, "Vulnerability to Progression in Schizophrenia".

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Action Editor: Brain and Cognition (2002-present)

ACADEMIC COMMITTEES AT THE UNIVERSITY OF PENNSYLVANIA:

1975-1977 Admissions Committee, Psychology Department
1984-1994 Research Committee, Psychiatry Department
1984-1987 Computer Task Force, Psychiatry Department
1984-1988 Chairman's Council for Planning and Development, Psychiatry Department
1990-1992 Senate Committee on Academic Freedom and Responsibility
1996-1998 Search Committee for Chair of Radiology
2000-2002 Search Committee for fMRI Physicist
1999-Present University Scholars Council

MAJOR TEACHING & CLINICAL RESPONSIBILITIES AT THE UNIVERSITY OF PENNSYLVANIA:

A. Teaching:

1. Co-founder and Advisor, Biological Basis of Behavior Undergraduate Major program.
2. Supervisor of postdoctoral Fellows (NIMH Training Grant) and doctoral students
3. Member of dissertation committees.
4. Rounds and teaching conferences for Psychiatry residents and Neuropsychology Fellows
5. Supervisor of undergraduate Honors theses.

B. Clinical:

1. Director of Neuropsychology, Department of Psychiatry, Hospital of the University of Pennsylvania
2. Supervisor of interns and practicum students in neuropsychology.
3. Director of Forensic Neuropsychiatry Center.

PRESENTATIONS & LECTURES BY INVITATION: (Outside Philadelphia, Past 5 years)

March 4, 2002. "Imaging Studies of Emotion Processing Examining the Effects of Age, Gender, and Disease." University of Iowa School of Medicine, Research Seminar, Iowa City, IA

March 5, 2002. "Behavioral and Neurobiologic Markers of Brain Dysfunction and Genetic Vulnerability to Schizophrenia." University of Iowa School of Medicine, Grand Rounds. Iowa City, IA

April 14, 2002. "The Neurobiology of Sex Differences in the Symptoms and Course of Schizophrenia" Advocates for the Jewish Mentally Ill, Wynnewood, PA

May 5, 2002. "The Science of Deceit: The Polygraph and its Progeny" Judicial In Service Training, Washington D.C.

May 22, 2002. "Functional and Structural Imaging Studies of Emotion Processing" Massachusetts General Hospital, Grand Rounds, Charlestown, MA

Oct 10, 2002. "What to do About Girls, Boys and Brains: Sex Differences From Phylogeny to

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Ontogeny" CAIS Commission of Women in Independent School's Annual Conference, Farmington, CT

Oct 23, 2002. "Neurobehavioral Measures as Endophenotypic Markers in Schizophrenia" State University of New York, Grand Rounds, Albany, NY

November 1, 2002 "Sex Differences in Learning" Learning and the Brain Conference, Cambridge, MA

November 2, 2002 "Imaging and Other Brain Function Issues" The Third National Seminar on Mental Health and the Criminal Law, Atlanta, GA

November 29, 2002 "Integration of Behavior, Anatomy and Physiology in the Search for Neural Substrates of Cognitive and Emotion Processing in Healthy People"
12th Australian Society for Psychophysiology Conference. University of Sydney, Australia

November 8, 2002 "Bio-Cognitive Aspects of Schizophrenia" Psychology Senior Seminar, Haverford College, Haverford, PA

January 15, 2003 "Adolescent Brain Development, Executive Functions, and Culpability"
American Bar Association, Washington, D.C.

February 14, 2003 "Neural Substrates of Emotion Processing"
Psychiatric Research Society, Park City, Utah

May 12, 2003 "The New Era of Neuropsychology; Neural Systems Probed Behaviorally and with Imaging" Mayo Clinic, Rochester, Minnesota

May 29, 2003 "Cognitive Impairment in Schizophrenia" 43rd Annual New Clinical Drug Evaluation Unit, Boca Raton, FL

September 21, 2003 "The Measurement of Emotion Processing: Exploring the Dark Side of the Moon" 3rd US-Korean Workshop on Psychiatric Genetics, Seoul, Korea

November 29, 2003 Neuroimaging studies in schizophrenia". Keynote to Symposium: Kognitive Störungen bei schizophrenen Erkrankungen III: Negative and positive symptoms in schizophrenia - models, methods and results. Ruhr-Universität Bochum Internationales Begegnungszentrum, Bochum, Germany.

December 11, 2003 "Developmental Differences Between Adolescents and Adults" Illinois Juvenile Justice Symposium, Chicago, Illinois.

February 11, 2004 "Information Processing in Schizophrenia: an fMRI study" Psychiatric Research Society, Park City, Utah.

February 25, 2004 "Implications of New Brain Imaging Research to Criminal Culpability of Adolescents" Briefing on Adolescent Development, National Press Club, Washington D.C.

March 9, 2004 "Facial Recognition as an Endophenotypic Marker in Autism" NIH sponsored

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Autism Genetics In the Pacific Rim, University of California - Los Angeles Medical Center.
Los Angeles, California.

April 1, 2004 "Teaching Science to Myelinating and Pruning Brains Constructed During the Middle Pleistocene Epoch: The Challenge of Dealing with Brain Maturation in Boys and Girls." NSTA, National Science Teachers Association, Atlanta, Georgia.

May 21st, 2004 "Using Brain Research in Juvenile Representation" Southwest Regional Juvenile Defender Center's (SWJDC) 2004 Regional Summit, Zealous Advocacy = Best Interests, Houston, Texas.

June 17th, 2004 "Research in Family Schizophrenia" Harrisburg State Hospital, Harrisburg, Pennsylvania.

June 21, 2004 "Psychopharmacology of Emotions" 24th Annual Collegium Internationale Neuro-Psychopharmacologicum (CINP) Congress-Paris. Paris, France.

June 23, 2004 "Endophenotypic Measures in Brain Behavior Studies in Schizophrenia" Bordeaux University, Bordeaux, France.

July 24, 2004 "The Developing Brain and the Technology That Let's Us See It" 25th Annual Capital Punishment Training Conference, Warrenton, Virginia.

September 16, 2004 "Are Sex Differences in Brain Anatomy and Physiology Related to Sex Differences in Emotion Regulation, Personality, and Aggression?" Sex, Brain and Human Aggression Conference, Delmenhorst, Germany.

October 18, 2004 "Recent Discoveries of Cognitive Neuroscience Using Brain Imaging" Brain Imaging and the Cognitive Sciences Conference, Washington, D.C.

April 2, 2005 "Episodic Memory and Affective Processing in Schizophrenia" The 7th Biennial Mt. Sinai Conference on Cognition in Schizophrenia, Savannah, GA.

April 11, 2005 "Brain Development and its Relevance to the Juvenile Death Penalty" Cornell Law School; Prof Blume's class, Ithaca, NY.

April 11, 2005 "Aggression and Deception: Some Legal Implications of Recent Advances in Neuroimaging and Neuroscience, Cornell Law School, Ithaca, NY.

April 22, 2005 "Understanding Brain Development" The National Seminar on the Development and Integration of Mitigation Evidence, Salt Lake City, UT.

April 22, 2005 "Schizophrenia: The Positive and Negative Symptoms" The National Seminar on the Development and Integration of Mitigation Evidence, Salt Lake City, UT.

August 18, 2005 "Emotion: The Unwelcome Guest at the Cognitive Party" Ben Gurion University of the Negev, Beersheva, Israel.

September 10, 2005 "Brain 101: Knowing Brain Development, Function and Disorder can Save

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Your Client's Life." Florida Public Defenders Association: Life Over Death Conference, Orlando, FL.

November 18, 2005 "The Developing Adolescent Brain" OPD, Capital Defense Division Capital Training Seminar, Baltimore, MD.

November 28, 2005 "Emotion: The Dark Side of Cognition. Insights from Neuroimaging Studies in Men and Women" University of Delaware, Newark, DE.

November 28, 2005 "Verify with MRI? Functional Imaging in the Context of Lie Detection." University of Delaware, Newark, DE.

February 10, 2006 "A Slice of Emotions: Neurobehavioral and (thinly sliced) fMRI Studies" Psychiatric Research Society Annual Meeting, Park City, UT.

April 7, 2006. "The Developing Brain: Judgement and Impulse Control" Indigent Criminal Defense: Advanced Skills for the Experienced Practitioner Conference, Richmond, VA.

July 12, 2006. "Sex Differences in Cerebral Function and Morphology in Mental Illness" CINP Symposium, Chicago, IL.

August 25, 2006. "Brain Structure and Function: New Frontiers. 11th Annual Federal Habeas Corpus Center, Pittsburgh, PA.

August 31, 2006. "Neuroimaging in the Study of Cognition and Emotion" Astra Zeneca, Wilmington, DE.

September 15, 2006. "Imaging in Schizophrenia" The International Symposium on Schizophrenia, Gottingen Research Association for Schizophrenia, Gottingen, Germany.

September 29, 2006 "The Inherent Mitigation of Youth: Brain Development in Adolescents and Young Adults. Making the Case for Life Conference, Las Vegas, NV.

November 13, 2006 "Brain Behavior Relationship of Normal and Disturbed Emotions in Schizophrenia and Autism" DFG International Research Training Group, Aachen University, Aachen, Germany.

April 20, 2007 "Gender Differences in Cerebral Function and Morphology in Normal Subjects. Advances in Neuroscience Conference, Napoli, Italy.

October 6, 2007 "Brain Function, Gender and Age" ASTAR National Judges' Science School. Baltimore, MD.

October 11, 2007 "Neurobiology of Sex Differences: Potential Relevance to Women in Science" Women's Leadership Board Meeting, Cambridge, MA.

November 16, 2007 "Brain Imaging" Ohio Association of Criminal Defense Lawyers. Columbus, Ohio.

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April 2, 2008 "Cutting Edge Neuroscience" Capital Habeas Corpus Unit Conference, Fort Lauderdale, FL.

November 7, 2008 "Some Advances in Cognitive and Affective Neuroscience with Potential Legal Relevance: Neuroimaging of Brain and Behavior" Institute for Social Science Faculty Fellows and Law faculty, Cornell University, Ithaca, New York

November 8, 2008 "Brain Development in Healthy and Vulnerable Populations: Lessons from Neuroimaging and Behavioral Measures", Joint Human Development, Psychology and Center for Behavioral Economics and decision Science Colloquium, Cornell University, Ithaca, New York

Nov. 19, 2008 "Is Fear Special? Studies on the Affective Neuroscience of Schizophrenia" Grand Rounds at University of Illinois in Chicago, Department of Psychiatry, Chicago, Illinois

November 11, 2008 "Finding the Right Expert and Using them Effectively" Capital Defense Workshop, Richmond, Virginia

April 22, 2009 "Evidence for Impairment of Heritability of Neurocognitive Functioning in Families of Schizophrenia Patients" Morehouse School of Medicine, Department of Psychiatry Grand Rounds. Atlanta, Georgia

ORGANIZING ROLES IN SCIENTIFIC MEETINGS: None.

BIBLIOGRAPHY:

Research Publications, peer reviewed:

1. Alexander LT, Gur RC, Gur RE, Patterson L. Peer assisted learning. Improving Human Performance Quarterly, 1974, 3, 175-186.
2. Gur RC, Gur RE. Handedness, sex and eyedness as moderating variables in the relation between hypnotic susceptibility and functional brain asymmetry. Journal of Abnormal Psychology, 1974, 83, 635-643.
3. Gur RC. An attention-controlled operant procedure for enhancing hypnotic susceptibility. Journal of Abnormal Psychology, 1974, 83, 635-643.
4. Gur RE, Gur RC, Marshalek B. Classroom seating and functional brain asymmetry. Journal of Educational Psychology, 1975, 67, 151-153.
5. Gur RC, Hilgard ER. Visual imagery and discrimination of differences between altered pictures simultaneously and successively presented. British Journal of Psychology, 1975, 66, 341-345.
6. Gur RE, Gur RC. Defense mechanisms, psychosomatic symptomatology and conjugate lateral eye movements. Journal of Consulting and Clinical Psychology, 1975, 43, 416-420.

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7. Gur RE, Gur RC, Harris LJ. Cerebral activation, as measured by subject's lateral eye movements, is influenced by experimenter location. Neuropsychologia, 1975, 13, 35-44.
8. Gur RC, Sackeim HA, Gur RE. Classroom seating and psychopathology: some initial data. Journal of Abnormal Psychology, 1976, 85, 122-124.
9. Gur RC, Reyher J. The enhancement of creativity via free imagery and hypnosis. American Journal of Clinical Hypnosis, 1976, 85, 237-249.
10. Sackeim HA, Packer IK, Gur RC. Hemisphericity, cognitive set and susceptibility to subliminal perception. Journal of Abnormal Psychology, 1977, 86, 624-630.
11. Gur RE, Gur RC. Sex differences in the relations among handedness, sighting-dominance and eye acuity. Neuropsychologia, 1977, 15, 585-590.
12. Sackeim HA, Gur RC, Saucy MC. Emotions are expressed more intensely on the left side of the face. Science, 1978, 202, 434-436.
13. Gur RC, Sackeim HA. Self-confrontation and psychotherapy. Psychotherapy: Theory, Research and Practice, 1978, 15, 258-265.
14. Sackeim HA, Gur RC. Lateral asymmetry in intensity of emotional expression. Neuropsychologia, 1978, 16, 473-481.
15. Sackeim HA, Gur RC. Self-deception, other-deception, and self-reported psychopathology. Journal of Consulting and Clinical Psychology, 1979, 47, 213-215.
16. Gur RC, Sackeim HA. Self-deception: A concept in search of a phenomenon. Journal of Personality and Social Psychology, 1979, 37, 147-169.
17. Sackeim HA, Nordlie JW, Gur RC. A model of hysterical and hypnotic blindness: cognition, motivation and awareness. Journal of Abnormal Psychology, 1979, 88, 474-489.
18. Gur RC, Reivich M. Cognitive task effects on hemispheric blood flow in humans: evidence for individual differences in hemispheric activation. Brain and Language, 1980, 9, 78-92.
19. Gur RC, Packer IK, Hungerbuhler JP, Reivich M, Obrist WD, Amarnek WS, Sackeim HA. Differences in the distribution of gray and white matter in human cerebral hemispheres. Science, 1980, 207, 1226-1228.
20. Sackeim HA, Greenberg MS, Weiman AL, Gur RC, Hungerbuhler JP, Geschwind N. Hemispheric asymmetry in the expression of positive and negative emotions: Neurological Evidence. Archives of Neurology, 1982, 39, 210-218.
21. Gur RC, Sussman NM, Alavi A, Gur RE, Rosen AD, O'Connor M, Goldberg HI, Greenberg JH, Reivich M. Positron emission tomography in two cases of childhood epileptic encephalopathy (Lennox-Gastaut Syndrome). Neurology, 1982, 32, 1191-1194.

Ruben C. Gur, Ph.D.

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22. Gur RC, Gur RE, Obrist WD, Hungerbuhler JP, Younkin D, Rosen AD, Skolnick BE., Reivich M. Sex and handedness differences in cerebral blood flow during rest and cognitive activity. Science, 1982, 217, 659-661.
23. Sussman NM, Gur RC, Gur RE, O'Connor MJ. Mutism as a consequence of callosotomy. Journal of Neurosurgery, 1983, 59, 514-519.
24. Gur RC, Gur RE, Rosen AD, Warach S, Alavi A, Greenberg J, Reivich M. A cognitive-motor network demonstrated by positron emission tomography. Neuropsychologia, 1983, 21, 601-606.
25. Natale M, Gur RE, Gur RC. Hemispheric asymmetries in processing emotional expressions. Neuropsychologia, 1983, 21, 555-565.
26. Reivich M, Gur RC, Alavi A. Positron emission tomography studies of sensory stimuli, cognitive processes and anxiety. Human Neurobiology, 1983, 2, 25-33.
27. Gur RE, Skolnick BE, Gur RC, Caroff S, Rieger W, Obrist WD, Younkin D, Reivich M. Brain function in psychiatric disorders: I. Regional cerebral blood flow in medicated schizophrenics. Archives of General Psychiatry, 1983, 40, 1250-1254.
28. Gur RE, Gur RC, Sussman NM, O'Connor MJ, Vey MM. Hemispheric control of the writing hand: The effect of callosotomy in a left-hander. Neurology, 1984, 34, 904-908.
29. Reivich M, Alavi A, Gur RC. Positron emission tomographic studies of perceptual tasks. Annals of Neurology, 1984, 15, 61-65 (Supplement).
30. Gur RE, Skolnick BE, Gur RC, Caroff S, Rieger W, Obrist WD, Younkin D, Reivich M. Brain function in psychiatric disorders: II. Regional cerebral blood flow in medicated depressives. Archives of General Psychiatry, 1984, 41, 695-699.
31. Youkin D, Hungerbuhler JP, O'Connor M, Goldberg H, Burke A, Kushner M, Hurtig H, Obrist W, Gordon J, Gur RC, Reivich M. Superficial temporal-middle cerebral artery anastomosis: Effects on vascular, neurologic, and neuropsychological functions. Neurology, 1985, 35, 462-469.
32. Gur RE, Gur RC, Skolnick BE, Caroff S, Obrist WD, Resnick S, Reivich M. Brain function in psychiatric disorders: III. Regional cerebral blood flow in unmedicated schizophrenics. Archives of General Psychiatry, 1985, 42, 329-334.
33. Trivedi SS, Gur RC, Gur RE, Skolnick BE, Obrist WD, Reivich M, Herman GT. Imaging regional cerebral blood flow measured by the 133-Xenon technique. rCBF Bulletin, 1986, 9, 175-178.
34. Stern MB, Gur RC, Saykin AJ, Hurtig HI. Dementia of Parkinson's disease and Alzheimer's disease: Is there a difference? Journal of the American Geriatrics Society, 1986, 34, 475-478.
35. Gur RE, Resnick SM, Alavi A, Gur RC, Caroff S, Dann R, Silver F, Saykin AJ, Chawluk

Ruben C. Gur, Ph.D.

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JB, Kushner M, Reivich M. Regional brain function in schizophrenia: I. A positron emission tomography study. *Archives of General Psychiatry*, 1987, 44, 119-125.

36. Gur RE, Resnick SM, Gur RC, Alavi A, Caroff S, Dann R, Silver F, Saykin AJ, Chawluk JB, Kushner M, Reivich M. Regional brain function in schizophrenia: II. Repeated evaluation with positron emission tomography. *Archives of General Psychiatry*, 1987, 44, 126-129.

37. Trope I, Fishman B, Gur RC, Sussman NM, Gur RE. Contralateral and ipsilateral control of fingers following callosotomy. *Neuropsychologia*, 1987, 25, 287-291.

38. Gur RC, Gur RE, Obrist WD, Skolnick BE, Reivich M. Age and regional cerebral blood flow at rest and during cognitive activity. *Archives of General Psychiatry*, 1987, 44, 617-621.

39. Gur RC, Gur RE, Resnick SM, Skolnick BE, Alavi A, Reivich M. The effect of anxiety on cortical cerebral blood flow and metabolism. *Journal of Cerebral Blood Flow and Metabolism*, 1987, 7, 173-177.

40. Knight H, Millman RP, Gur RC, Saykin AJ, Doherty JU, Pack AI. Clinical significance of sleep apnea in the elderly. *American Review of Respiratory Disease*, 1987, 136, 845-850.

41. Gur RC, Gur RE, Silver FL, Obrist WD, Skolnick BE, Kushner M, Hurtig HI, Reivich M. Regional cerebral blood flow in stroke: hemispheric effects of cognitive activity. *Stroke*, 1987, 18, 776-780.

42. Warach S, Gur RC, Gur RE, Skolnick BE, Obrist WD, Reivich M. The reproducibility of the Xe-133 inhalation technique in resting studies: task order and sex related effects in healthy young adults. *Journal of Cerebral Blood Flow and Metabolism*, 1987, 7, 702-708.

43. Trivedi SS, Gur RC. Computer graphics for neuropsychological data. *Proceedings of the National Computer Graphics Association*, 1987, 3, 22-32.

44. Gur RC, Gur RE, Skolnick BE, Resnick SM, Silver FL, Chawluk JB, Muenz L, Obrist WD, Reivich M. Effects of task difficulty on regional cerebral blood flow: relationships with anxiety and performance. *Psychophysiology*, 1988, 25, 392-399.

45. Schmidt ML, Gur RE, Gur RC, Trojanowski JQ. Intraneuronal and extracellular neurofibrillary tangles exhibit mutually exclusive cytoskeletal antigens. *Annals of Neurology*, 1988, 23, 184-189.

46. Resnick SM, Gottlieb GL, Gur RE, Gur RC, Forciea MA, Zimmerman RA, Malamut B, Saykin AJ, Reivich M, Alavi A. Identical twins with probable Alzheimer's Disease: behavior, anatomy and physiology. *Neuropsychiatry, Neuropsychology and Behavioral Neurology*, 1988, 1, 61-72.

47. Gur RC, Trivedi SS, Saykin AJ, Gur RE. "Behavioral imaging" - a procedure for analysis and display of neuropsychological test scores: I. Construction of algorithm and initial clinical evaluation. *Neuropsychiatry, Neuropsychology and Behavioral Neurology*, 1988, 1,

Ruben C. Gur, Ph.D.

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53-60.

48. Gur RC, Saykin AJ, Blonder LX, Gur RE. "Behavioral imaging": II. Application of the quantitative algorithm to hypothesis testing in a population of hemiparkinsonian patients. Neuropsychiatry, Neuropsychology and Behavioral Neurology, 1988, 1, 87-96.
49. Gottlieb GL, McAllister TW, Gur RC. Depot neuroleptics in the treatment of behavioral disorders in patients with Alzheimer's disease. Journal of the American Geriatric Society, 1988, 36, 619-621.
50. Gottlieb GL, Gur RE, Gur RC. Reliability of psychiatric scales in patients with DAT. American Journal of Psychiatry, 1988, 145, 857-860.
51. Resnick SM, Gur RE, Alavi A, Gur RC, Reivich M. Positron emission tomography and subcortical glucose metabolism in schizophrenia. Psychiatry Research, 1988, 24, 1-11.
52. Trope I, Rozin P, Gur RC. Validation of the lateral limits technique with a callosotomy patient. Neuropsychologia, 1988, 26, 673-684.
53. Blonder LX, Gur RE, Gur RC. The effects of right and left hemiparkinsonism on prosody. Brain and Language, 1989, 36 193-207.
54. Trivedi SS, Gur RC. Topographic mapping of cerebral blood flow and behavior. Computers in Biology and Medicine, 1989, 19, 219-229.
55. Blonder LX, Gur RE, Gur RC, Saykin AJ, Hurtig HI. Neuropsychological functioning in hemiparkinsonism. Brain and Cognition, 1989, 9, 177-190.
56. Saykin AJ, Gur RC, Sussman NM, Gur RE. Memory deficits before and after temporal lobectomy: Effect of laterality and age of onset. Brain and Cognition, 1989, 9, 191-200.
57. Gur RE, Resnick SM, Gur RC. Laterality and frontality of cerebral blood flow and metabolism in schizophrenia: relationship to symptom specificity. Psychiatry Research, 1989, 27, 325-334.
58. Trojanowski JQ, Schmidt ML, Otvos L, Gur RC, Gur RE, Hurtig H, Lee VMY. Selective expression of epitopes in multi-phosphorylation repeats of the high and middle molecular weight neurofilament proteins in alzheimer neurofibrillary tangles. Annals of Medicine, 1989, 21, 113-116.
59. Erwin RJ, Mawhinney-Hee M, Gur RC, Gur RE. Effects of task and gender on EEG indices of hemispheric activation: similarities to previous rCBF findings. Neuropsychiatry, Neuropsychology, and Behavioral Neurology, 1989, 2, 248-260.
60. Sperling MR, Gur RC, Alavi A, Gur RE, Resnick S, Oconnor MJ, Reivich M. Subcortical Metabolic Alterations in Partial Epilepsy. Epilepsia, 1990, 31, 145-155.
61. Gur RC, Saykin AJ, Benton A, Kaplan E, Levin H, Kester DB, Gur RE. "Behavioral imaging": III. Inter-rater agreement and reliability of weightings. Neuropsychiatry,

Ruben C. Gur, Ph.D.

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Neuropsychology, and Behavioral Neurology, 1990, 3, 113-124.

62. Gur RE, Gur RC. Gender differences in regional cerebral blood flow. Schizophrenia Bulletin, 1990, 16, 247-254.
63. Stafiniak P, Saykin AJ, Sperling MR, Kester DB, Robinson LJ, O'Connor MJ, Gur RC. Acute naming deficits following dominant temporal lobectomy: prediction by age at first risk for seizures. Neurology, 1990, 40, 1509-1512.
64. Gur RE, Gur RC, Saykin AJ. Neurobehavioral studies in schizophrenia: implications for regional brain dysfunction. Schizophrenia Bulletin, 1990, 16, 445-451.
65. Gur RC, Saykin AJ, Muenz LR, Trivedi S, Gur RE. Response to Yeo et al.'s critique of behavioral imaging. Neuropsychiatry, Neuropsychology, and Behavioral Neurology, 1990, 3, 304-312.
66. Kohn MI, Tanna NK, Herman GT, Resnick SM, Mozley PD, Gur RE, Alavi A, Zimmerman RA, Gur RC. Analysis of brain and CSF volumes from magnetic resonance imaging: methodology, reliability and validation. Radiology, 1991, 178, 115-122.
67. Gur RE, Mozley D, Resnick SM, Levick S, Erwin R, Saykin A, Gur RC. Relations among clinical scales in schizophrenia: overlap and subtypes. American Journal of Psychiatry, 1991, 148, 472-478.
68. Gur RC, Mozley PD, Resnick SM, Gottlieb GE, Kohn M, Zimmerman R, Herman G, Atlas S, Grossman R, Berretta D, Erwin R, Gur RE. Gender differences in age effect on brain atrophy measured by magnetic resonance imaging. Proceedings for the National Academy of Sciences, 1991, 88, 2845-2849.
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